

Original Request - October, 2001
Information Collection Request 1941.01
Evaluation of the PrintSTEP State Pilot Program

PART A OF THE SUPPORTING STATEMENT

1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title: Evaluation of the PrintSTEP State Pilot Program

1(b) Short Characterization/Abstract

PrintSTEP, which stands for “Printers’ Simplified Total Environmental Partnership,” was initiated as part of the EPA’s “Common Sense Initiative,” the goal of which was to create environmental protection strategies that are cleaner for the environment and cheaper and smarter for industry and taxpayers. Representatives from federal, state, and local governments, industry, environmental justice groups, and labor organizations developed PrintSTEP by redesigning the permitting process currently in effect for this industry. PrintSTEP is a single enforceable agreement that regulates a printing facility’s air, water, and hazardous waste streams all at once. It combines environmental requirements for printing facilities into one system, and addresses both federal and state requirements. It is a voluntary pilot program and it does not change the existing environmental emissions or release standards for the printing industry. Instead, it changes the process of implementing those standards to improve efficiency and environmental performance. This alternative regulatory scheme incorporates meaningful public involvement in the regulatory process, provides printers with one regulatory agreement for all media, provides flexibility for printers to make many types of process changes without additional paperwork, and promotes pollution prevention practices. Details of the PrintSTEP program are included in three project documents: a *State Guide* for the pilot states, a *Plain Language Workbook Template* for participating printers, and a *Community Handbook* for interested community members. These three documents are publicly available at <http://www.epa.gov/sectors/prntstep.htm>.

EPA has funded three states (Missouri, Minnesota and New Hampshire) through cooperative agreements to test the PrintSTEP concepts in a pilot project. Currently, the three pilot states are preparing to start to solicit the participation of volunteer printing facilities. These printers will prepare a single PrintSTEP application (covering their waste water, storm water, hazardous waste and air emissions) and submit it to the state agency. In many cases, this single application will be a substitute for several sets of paperwork a printer may currently be required to complete for each individual waste stream. Another key component of PrintSTEP is meaningful public involvement. All PrintSTEP applications will be available for public review, and for many applications, community members will have an opportunity to provide comments or participate in public meetings and discussions with the printers.

As a pilot project, EPA must conduct a thorough evaluation to help determine whether or not to go forward with further implementation of the program. In the process of doing so, improvement measures for the program can be implemented. The evaluation of the PrintSTEP pilot program

aims to systematically identify the impacts the program has had on three types of stakeholders: printers, community residents, and the state government agencies administering the program. A primary goal of the evaluation is to answer the question: What difference has PrintSTEP made to each of these three types of stakeholders?

The evaluation will include a telephone survey of participating printers and a comparison group of non-participating printers. A baseline survey of these two groups will be conducted at the start of the pilot project, an interim survey will be conducted mid-way through the pilot, and a post-pilot survey will be conducted at the conclusion of the pilot project. These surveys will be administered by an EPA contractor. Additional information on printers' environmental releases and wastes will come from the PrintSTEP applications collected by the pilot states. Non-participating printers in the comparison group will be asked to supply the same type of information as is on the PrintSTEP application. The community's experience with the PrintSTEP pilot will also be evaluated through a telephone survey conducted approximately mid-way through the pilot project. The pilot states will conduct this survey. The experiences of the pilot states in the PrintSTEP program will be evaluated through in-depth interviews with the PrintSTEP coordinators in each state. This information collection effort is not included in this ICR as fewer than ten interviews will be conducted.

The results of the evaluation will be used by EPA and states considering the expansion of the PrintSTEP program beyond the pilot stage. Additionally, the multi-stakeholder representatives (and their constituents) who contributed their time and expertise over the four-year development of PrintSTEP will also use the evaluation results to assess their interest in participating in a program to expand the implementation of PrintSTEP concepts.

2. NEED FOR AND USE OF THE COLLECTION

2(a) Need/Authority for the Collection

To evaluate the effectiveness of the pilot project, information needs to be collected from the pilot project participants. Without a comprehensive evaluation, the ability of the pilot project to inform future policy (the purpose of conducting and sponsoring the pilot in the first place) would be lost.

Delegation 1-47 gives the Office of Enforcement and Compliance Assurance the authority "To approve grants and cooperative agreements aimed at fostering environmental enforcement and improving compliance with environmental law in the U.S. and foreign countries to public and private agencies, organizations, and institutions; colleges, universities, and other institutions of higher education; federally recognized tribal entities; private individuals, and to any others for activities including, but not limited to, training, studies, investigations, **surveys**, public education programs, and research, and to approve fellowships; where authorized under: Clean Air Act, Section 103; Clean Water Act, Section 104; Solid Waste Disposal Act, Section 8001; Federal Insecticide, Fungicide, and Rodenticide Act, Section 20; Toxic Substances Control Act, Section 10; Marine Protection, Research, and Sanctuaries Act, Section 203; Safe Drinking Water Act, Section 1442; Comprehensive Environmental Response, Compensation and Liability Act, Section 311; and Indian Environmental General Assistance Program Act, Section 11."

2(b) Practical Utility/Users of the Data

The evaluation results will be used by EPA and states to determine whether the PrintSTEP concepts should be adopted for national application. The results will measure the success of the PrintSTEP concept and tools, and will be published in a final EPA report addressing what changes have taken place in PrintSTEP facilities, and whether or not those changes can be attributed to PrintSTEP. Quantitative and qualitative results will be tabulated for the baseline, midpoint and end of the program, and the following research questions will be addressed:

- Does PrintSTEP effect emissions, wastes and discharges from printing (both overall and for each medium)?
- Has PrintSTEP changed printers' use of specific pollution prevention practices?
- Can states administer PrintSTEP as a multi-media program?
- Does PrintSTEP improve efficiency for the state regulators?
- Do printers have a better understanding of their regulatory requirements under PrintSTEP?
- Does PrintSTEP effect printers' ability to respond to market conditions?
- Does PrintSTEP provide an opportunity for meaningful public involvement?
- Is PrintSTEP cost-effective for all stakeholders?

Conducting and evaluating the PrintSTEP pilot contributes to most Agency goals, as stated in EPA's *Strategic Plan* (EPA 190 R-00-002). The *Strategic Plan* stresses EPA's promotion of innovative approaches such as PrintSTEP which "streamlined regulatory processes, cut paperwork, built more flexibility into regulations, established new voluntary programs and partnerships, and adopted new cross-Agency, cross-media perspectives on health and environmental problems." In particular, the data collection for the PrintSTEP pilot evaluation contributes to EPA Goal 1 (Clean Air), Goal 2 (Clean and Safe Water), Goal 4 (Preventing Pollution), Goal 5 (Better Waste Management), and Goal 7 (Quality Environmental Information).

3. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

3(a) Nonduplication

The data requirements for the study have been carefully reviewed to ensure that the needed information cannot be obtained from other sources. The information requested either in the telephone interviews or the written portion of the evaluation is not available through any other source within the EPA, nor is it available through sources outside the Agency. This pilot project has not been previously conducted, and therefore, has not been evaluated.

3(b) Public Notice Required Prior to ICR Submission to OMB

In compliance with the 1995 Paperwork Reduction Act, EPA solicited public comments during a 60-day period prior to submission of the ICR to OMB. EPA issued a Federal Register notice announcing the ICR and providing a burden estimate on March 14, 2000, FR Vol. 65, No. 14 (see Appendix E). No comments were received before the comment period ended on May 15, 2000.

3(c) Consultations

The research design, data collection instruments and data collection plan were developed by Abt Associates Inc., under U.S. EPA contract 68-W6-0021. The work was done with close consultation and significant input from U.S. EPA and the PrintSTEP stakeholder representative group. This group included representatives of the parties from whom the information is to be obtained, namely printers and community members. This group was directly involved with designing the evaluation strategy and data collection instruments, ensuring that: the environmental benefit of the pilot project is thoroughly tracked; the data collection instruments are technically sound; the instructions are clear; the terminology is coherent, unambiguous, and understandable to respondents; respondent burden is minimized; and the data is obtainable, but has not been collected previously. Additionally, the contractor's survey research professionals reviewed the survey instruments to check that items are unambiguous, unbiased, nonrepetitive, and properly sequenced, skip patterns are clear, and answer categories are mutually exclusive and collectively exhaustive.

3(d) Effects of Less Frequent Collection

Survey data will be collected from printers in each of the PrintSTEP pilot states at three separate points in time: baseline, interim, and at the end of the pilot. Data will be collected from community members at a single point in time during the pilot.¹ The pilot is expected to last for approximately three years and the printers' data collections are expected to occur approximately in the summers of 2001, 2002, and 2003. The community data collection is expected to occur in 2002. Surveying printers at these three points in time is necessary to reliably measure the changes brought about by the PrintSTEP program. Less frequent data collection could jeopardize the quality of the results. For example, a printer may not accurately recount the actions taken related to the public meeting if he/she is asked about that meeting a year or more after it occurred.

3(e) General Guidelines

This information collection adheres to the general guidelines set forth by the Office of Management and Budget (OMB).

3(f) Confidentiality

All survey respondents will be assured that the information they provide will be used only for the purpose of this research. No data will be released in a form that can identify individual respondents.

Prior to beginning the telephone surveys, all respondents will receive an advance letter from their local trade association and/or the state environmental agency. The letter will discuss EPA's sponsorship of the survey, explain the importance and intended applications of the survey and request the respondent's cooperation. The advance letter will indicate that the respondent will

¹ It is not possible to collect baseline data from community participants, because they will be unknown. It was determined that the best way to get accurate and timely information from this group would be to survey them soon after they have completed going through the PrintSTEP process.

soon receive a telephone call from a survey research firm, and will also stress that the respondent's contribution to the survey is voluntary.

Prominent in the advance letter will be an assurance from EPA and the contractor collecting the data that information will be presented in aggregate form only without individual identifiers. This assurance will be reiterated proceeding the administration of the telephone interviews.

Several steps will be taken to ensure confidentiality of individual responses. The survey will be conducted by the survey research firm's staff who will employ the following procedures:

- All employees sign a blanket confidentiality agreement at the time of hire;
- Access to data files containing unique identifiers is limited through password protection;
- Internal ID encoding will be used instead of individual identifiers; and
- No data on individual respondents will be released or identifiable in any published reports or analyses; information will be presented in aggregations only. EPA staff will not receive any records linking respondents' names to survey identification codes.

3(g) Sensitive Questions

Sensitive questions are defined in the ICR instructions as "questions concerning sexual behavior or attitudes, religious beliefs, or other matters usually considered private." This information collection does not include sensitive questions.

4. THE RESPONDENTS AND THE INFORMATION REQUESTED

4(a) Respondent/Standard Industrial Classification (SIC) Codes

For the printer's data collection, respondents will be employed in printing facilities. Community members to be surveyed are expected to represent the general public and are not associated with a particular business sector.

Parts of the following SIC codes will be affected by this evaluation:

- SIC code 27 - Printing and Publishing
- SIC code 2396 -Automotive Trimmings, Apparel Findings and Related Articles (e.g., printing and embossing on fabric articles)
- SIC code 3999 - Manufacturing Industries, Not Elsewhere Classified (e.g., printing of eyeglass frames).

4(b) Information Requested

Full details of the evaluation are described in the *PrintSTEP Evaluation Strategy*, attached as Appendix A. The *Evaluation Strategy* was developed in close consultation and with significant input from the PrintSTEP stakeholder representative group. This group included representatives of the parties from whom the information is to be obtained, namely printers and community members. Additionally, state environmental agencies and environmental justice representatives

were included in this group. The group was involved with designing the evaluation strategy and data collection instruments, ensuring that: the environmental benefit of the pilot is thoroughly tracked; the data collection instruments are technically sound; the instructions are clear; the terminology is coherent, unambiguous, and understandable to respondents; respondent burden is minimized; and the data is obtainable, but has not been collected previously. The research approach was designed to minimize respondent burden as well as to minimize data collection costs to the government. The information collection described in the *Evaluation Strategy* includes:

- **Background questionnaire for printers.** In Minnesota and New Hampshire, the PrintSTEP pilot coordinators will send a questionnaire to printers to assist in identifying the universe of printers in the pilot implementation area who may ultimately be subject to the evaluation. The questionnaire will ask for the following information: company name, contact person, mailing address, facility address, type of printing process operated, type of printing jobs, and whether or not the printer would possibly be interested in joining PrintSTEP. A space for comments will also be included. The questionnaire will be printed as a tri-fold with postage-paid return address. The PrintSTEP coordinator for these pilot states will receive the responses and will use them to build and/or enhance their database of potentially interested printers who may be subject to the evaluation.
- **Telephone survey of PrintSTEP printers.** All printers who volunteer to participate in the pilot project ("PrintSTEP printers") will be contacted to complete a telephone survey (attached as Appendix B) at three times during the pilot project. Upon joining, an initial survey will establish the baseline environmental status and public involvement history of these printers. An interim survey will be conducted mid-way through the pilot, and a post-pilot survey will be conducted at the conclusion of the pilot project.
- **Telephone survey of comparison printers.** A group of printers who are not participating in PrintSTEP will be identified in each pilot state to serve as a comparison group. The method for recruiting this group is described in section 5(b). Collecting comparable information from these printers will enable EPA to determine if the environmental changes of the PrintSTEP printers can be attributed to the PrintSTEP program or if such changes would have occurred without PrintSTEP. After the PrintSTEP application period is closed, the comparison group will be identified and contacted for an initial telephone interview to establish their baseline environmental status and public involvement history. The questions used in this interview are similar to those asked of the PrintSTEP printers, as detailed in the survey instrument (Appendix B). As with the PrintSTEP printers, the comparison group will also be interviewed via telephone survey again at the mid-point and conclusion of the pilot project.
- **Written information from PrintSTEP printers.** The pilot states will collect information on the PrintSTEP printers' environmental releases and wastes from PrintSTEP applications that printers submit when joining PrintSTEP. Printers will also provide annual updates of this information to the state. For many printers, this application will replace the separate applications they filled out in the past for each media program (air, water, hazardous waste, and storm water). A sample application template is attached as Appendix C. The application includes quantitative information such as quantity and type

of hazardous waste generated annually, pounds or gallons of VOC-containing and HAP-containing materials used per year, and pollution prevention practices employed. Also, printers record an indicator of their level of production (e.g., sales, square feet of printed material, etc.) so that changes in environmental impact related to changes in production can be accounted for in the analysis. To evaluate whether or not PrintSTEP is more cost-effective for printers than the traditional regulatory process, additional written information regarding the costs of participating in PrintSTEP will be collected as a fax-back or email-back form following the telephone interview. A sample fax-back form is included as Appendix F.

- **Written information from comparison printers.** As non-participants, the comparison group will not be submitting a PrintSTEP application. However, similar information on their environmental releases and wastes is needed to determine if environmental changes in the PrintSTEP printers can actually be attributed to the PrintSTEP program. At the conclusion of the telephone survey, each comparison printer will be asked to submit written information equivalent to the information collected on the PrintSTEP application. A form will be emailed or faxed to the respondent. It will also include questions related to the costs associated with environmental activities (see Appendices C and F). This information will be collected and entered into a database by the states.
- **Telephone survey of community members.** The community's experience with the PrintSTEP pilot will be evaluated through a telephone survey conducted approximately mid-way through the pilot project. The states will conduct this survey. For community members, information will be collected on how they became aware of PrintSTEP, in what ways they participated, and how effective they felt their participation was. The survey instrument for community members is attached in Appendix D.

5. THE INFORMATION COLLECTED - ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

5(a) Agency Activities

The EPA will be responsible for directing the work of the survey research contractor for the data collection and analysis. The Agency will also facilitate the transfer of data from the pilot states to the contractor, as the states are providing EPA with the database of written data collected, coded by facility identification code, rather than facility name.

5(b) Collection Methodology and Management

PrintSTEP program participants will be volunteers. They will be identified by each state through outreach, assisted in part by local trade associations. For the evaluation, a comparison group will also be identified of non-participating printers. They will be identified by the states with close cooperation with or directly through the trade associations. In Missouri, the pilot will be implemented in the St. Louis area. In Minnesota, it will be implemented in the St. Cloud area. In New Hampshire, it will be implemented in the Manchester area. The comparison group will be drawn from printers in other parts of each state. The list of printers will be identified primarily through the responses to the background questionnaires for printers sent by the states, as

described above in section 4(b). The comparison group will be recruited by systematically and randomly selecting printers outside the pilot areas, but within the pilot state, who responded to the questionnaire as potentially being interested in participating. If this method does not result in sufficient participation (see section B.1(c) regarding determination of the comparison group size), the printing trade associations will assist in identifying the printers that would be likely to volunteer for a PrintSTEP program, and who are similar to the group of participating printers in characteristics such as environmental impact, type of printing processes used, and size of facility.

Community participants in the evaluation will be selected from lists of community members who submitted comments, attended meetings, or otherwise participated in the PrintSTEP process. A comparison group of community members will not be used because there is no comparable public involvement process currently in existence to which PrintSTEP can be compared. Collecting information about public involvement in environmental regulatory activities in general would constitute a much larger study, separate in its scope from the evaluation of PrintSTEP.

The printers' survey will be conducted using Computer Assisted Telephone Interviewing (CATI) by experienced interviewers. The CATI programs move the interviewer swiftly and accurately through skip patterns within the instrument. This technique was selected as the most cost-effective means to minimize data processing time and data entry errors, to reduce the burden on the respondents by reducing the length of the call, and to reduce the need for follow-up calls. Currently, printers have not yet been recruited for the pilot project, therefore, it was not possible to conduct an actual pretest of the survey. However, a review of the survey instruments by the survey research contractor to EPA indicates that the printer's survey will take approximately 12 minutes.

Additionally, written information on environmental releases and wastes, and costs of meeting environmental regulatory requirements will be collected from the comparison group via an email or fax-back form. Only cost information will be collected from the PrintSTEP printers by this method (the rest of the written data from participating printers will be submitted to state agencies as a routine part of the PrintSTEP program). At the conclusion of the telephone interview, the interviewer will explain the written information required and will email or fax the form to the respondent. This method will simplify the return process for the respondent. Entry and coding of written portions will be done by the states, and entry and coding of the telephone survey will be done by the survey research firm contracted by EPA.

This combination of telephone survey and written information was considered the least burdensome for facilities without losing the reliability or accuracy of the information collected. The telephone survey, which is expected to last approximately 12 minutes, focuses on collecting the more subjective information. Quantitative information is collected in written format for convenience (fax-back or email-back) and accuracy (the respondent may have to consult with their records or coworkers to answer these questions).

The telephone survey of community participants will be conducted by the pilot states. States will also be responsible for entering and coding these data. All survey results will be compiled and

analyzed into a final report by the EPA contractor conducting the printer survey.

5(c) Small Entity Flexibility

Respondents in the proposed data collection will include large printing establishments as well as small establishments located in PrintSTEP pilot areas. Printers of every size are allowed to participate in the program, and surveying the printers is the only way to obtain information that is representative of the effectiveness of PrintSTEP. The information obtained from all of these businesses, and a comparable comparison group, is critical in evaluating the PrintSTEP program. Every effort has been made to minimize the burden on respondents. Specifically, respondent burdens for small entities (and all other respondents) will be minimized in the following ways:

- The survey was designed to be brief (12 minutes) by asking a limited set of questions which focus on only the pertinent issues of the evaluation.
- The questions in the survey only ask for information that cannot be obtained from other sources.
- The survey will be conducted using Computer Assisted Telephone Interviewing (CATI) by experienced interviewers. The CATI programs move the interviewer swiftly and accurately through skip patterns within the instrument, reducing errors and the need for follow-up calls.

5(d) Collection Schedule

Information collection requested by EPA will begin upon approval of the ICR and after the PrintSTEP application deadline. Participating printers will be interviewed three times during the PrintSTEP pilot. Within two months of volunteering, printers will be interviewed as part of the baseline data collection. Following approval of their application, a follow up interview will be conducted, largely focused on their public involvement activities. A final interview will be conducted at the conclusion of the pilot project, which is not more than three years after printer recruitment. The comparison group of printers will be interviewed three times as well: after the PrintSTEP application deadline, approximately one year after that, and at the end of the pilot project.

Data will be collected from community participants once during the pilot program. Interviews will be conducted during the two months following the community members' involvement in the PrintSTEP public participation activities for any given printer. It is not possible to interview community members before the pilot (to gather baseline data), because there is no way of knowing who will later become a participant in PrintSTEP.

An interim report will be completed two months following the completion of the mid-point data collection. A final report will be completed within two months of completing the post-pilot data collection. These reports will include an analysis of the results from the information collected from printers, community members, and the pilot states.

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

6(a) Respondent Burden

The PrintSTEP evaluation includes a telephone interview with three types of respondents: 1) printers who are voluntarily participating in the PrintSTEP program; 2) a volunteer comparison group of printers who are not participating in PrintSTEP; and 3) community members who have participated in the public involvement component of PrintSTEP. For the PrintSTEP printers, written data will be collected detailing the costs of participating in the PrintSTEP program.. For the non-participating, comparison group printers, written data will be collected detailing the costs of meeting their regulatory requirements in the traditional system. For the comparison group of printers, additional written data will be collected on environmental releases and wastes. It is anticipated that a total of 175 printers will apply to participate in PrintSTEP across the three pilot states. The *Evaluation Strategy* calls for a census, rather than a sample of these printers. Justification for this approach is presented in the *Evaluation Strategy* (Appendix A) and in Part B of this ICR. Assuming a 90% response rate, interviews will be conducted with 158 printers. The evaluation will also systematically and randomly recruit a comparison group of 172 printers (see section B.1(c) regarding determination of the comparison group size and recruitment of comparison group participants). Assuming a 90% response rate, interviews will be conducted with 156 printers. Combined, it is anticipated that approximately 314 printers will be interviewed three times during the course of the evaluation and that the person interviewed will be an environmental professional. It is anticipated that 175 community members will participate in PrintSTEP across the three pilot states. All of these community members will be contacted, rather than sampling. Assuming a 75% response rate, 131 community members will be interviewed.

The telephone portion of the printer's survey is expected to take approximately 12 minutes to complete. The written information on environmental releases and wastes, plus cost information, is expected to take 2.75 hours for printers to complete. For PrintSTEP printers, this environmental release information will be collected by the states through the PrintSTEP applications. The state background questionnaire for printers is expected to take approximately 12 minutes to complete. It is estimated that 700 facilities will respond (assuming a maximum response rate of 50%). The telephone interview with community members is expected to take 15 minutes. The estimates of respondent burden are shown in the table below.

Respondent Type	Estimated number of respondents	Time to complete state background questionnaire	Time to respond to telephone survey (hrs) ¹	Time to complete written response (hrs) ¹	Total respondent burden (hrs)
Year 1 (baseline)					
Printers responding to state mailing	700	0.2	na	na	140
PrintSTEP printer	158		0.2	2.75	466
Comparison printer	156		0.2	2.75	460
Year 2					
PrintSTEP printer	158		0.2	2.75	466

Comparison printer	156	0.2	2.75	460
Community member	131	0.25	0.00	33
Year 3				
PrintSTEP printer	158	0.2	2.75	466
Comparison printer	156	0.2	2.75	460
Total for all 3 years				2952

¹ Estimate based on preliminary review of the survey instruments by Abt Associates.

6(b) Respondent Costs

The PrintSTEP evaluation utilizes the telephone interviews and written data collection forms to collect all the data necessary from the respondent. There are no capital, operations, or maintenance costs associated with this information collection. At this time, it is assumed that no payment or gift will be provided to respondents. If the pilot states find that recruiting a comparison group of printers is difficult, a gift of less than five dollars in value may be considered (e.g., pen, coupon). The only cost to the respondents resulting from this survey is their time, as shown in the table below.

Respondent Type	Estimated number of respondents	Time to respond to information request (hr/printer) ¹	Total respondent burden (hrs)	Estimated avg. compensation of respondent (\$/hr) ²	Total respondent burden in monetary terms (\$)
Year 1 (baseline)					
Printers responding to state mailing	700	0.2	140	\$28.59	\$4,003
PrintSTEP printer	158	2.95	466	\$28.59	\$13,326
Comparison printer	156	2.95	460	\$28.59	\$13,157
Year 2					
PrintSTEP printer	158	2.95	466	\$28.59	\$13,326
Comparison printer	156	2.95	460	\$28.59	\$13,157
Community member	131	0.25	33	\$21.16	\$693
Year 3					
PrintSTEP printer	158	2.95	466	\$28.59	\$13,326
Comparison printer	156	2.95	460	\$28.59	\$13,157
Total for all 3 years					\$84,144

¹ Estimate based on preliminary review of the survey instruments by Abt Associates.

² Compensation data is from the U.S. Department of Labor's Bureau of Labor Statistics' *Employer Costs for Employee Compensation Summary - March 2000*. Printers' compensation from Table 12, compensation for employees in manufacturing, white-collar, technical occupations. Community member compensation from Table 1, compensation for civilian workers (private industry and State and local government). Compensation includes wages and salaries, and benefits (paid leave, supplemental pay, insurance, retirement and savings, and legally required benefits).

6(c) Estimating Agency Burden and Cost

The total contracted cost to the federal government under contract 68-W6-0021 for project

planning and management, development of research design and data collection instruments was \$83,700. Additional contract cost will be incurred for conducting phone surveys to printers, preparation of data files, and analysis and reporting of results. In addition, the three pilot states will fund several activities, including the telephone survey for the community participants, sending advance letters to printers about the evaluation, follow up with the comparison group of printers for the written portion, and entry and coding of the written portion of the data collection for all printers.

6(e) Reasons for Change in Burden

This is a new data collection effort, therefore this section is not applicable.

6(f) Burden Statement

It is estimated that each PrintSTEP participant and comparison group printer will spend 2.95 hours per year (\$84.34) or a total of 8.85 hours (\$253.02) over three years to:

- respond to the annual telephone survey;
- complete the fax-back form on their costs associated with their environmental requirements (i.e., PrintSTEP requirements for participants and traditional regulatory requirements for the comparison group); and
- document their environmental releases and wastes (i.e., on the PrintSTEP application for participants or on an equivalent form for the comparison group).

Each of the participating community members interviewed is expected to spend 15 minutes (\$5.29) responding to the one-time telephone survey. No other information collection is expected from this respondent group.

PART B OF THE SUPPORTING STATEMENT

1. SURVEY OBJECTIVES, KEY VARIABLES, AND OTHER PRELIMINARIES

1(a) Survey Objectives

Details of the survey objectives and how they contribute to the overall PrintSTEP evaluation are described in the *PrintSTEP Evaluation Strategy* (Appendix A). Key points of the strategy are summarized here.

Because PrintSTEP is a multifaceted program, it has a variety of goals. The PrintSTEP Project Team has identified seven types of expected outcomes, each of which has several component parts.

- ▶ enhanced environmental protection (*instrument = written information from printers*);
- ▶ increased use of pollution prevention practices (*instrument = written information from printers*);
- ▶ simplified regulatory process for printers (*instruments = telephone survey and fax back form from printers*);
- ▶ improved efficiency of administration for state governments (*instrument = interviews with*

- ▶ <10 PrintSTEP pilot coordinators);
- ▶ enhanced public involvement (*instrument = telephone survey of community participants*);
- ▶ participants realize benefits and are motivated to participate in PrintSTEP (*instruments = all*); and
- ▶ cost effectiveness for all stakeholders (*instrument = telephone survey of printers and community participants, interviews with <10 PrintSTEP pilot coordinators*).

This broad set of expected outcomes will require a range of distinct data collection and analysis activities, as described above in section 4(b). Data will be collected before implementation, mid-way through the pilot program, and at the end of the pilot. A key feature of the recommended design is the use of a comparison group of printers as a tool for gauging the impact of the PrintSTEP program. The specific data collection activities are described below.

Printers: Telephone Survey and PrintSTEP Application Forms

It is critical to the evaluation to understand how printers view the PrintSTEP program, how the costs of participating compare to the costs of not participating, and what changes participating printers have made as a result of their participation in the program. Both participating and non-participating printers will be interviewed by telephone three times: before the program is implemented, midway through the pilot, and at the end of the pilot. The initial interview will provide baseline data. The baseline survey establishes a starting point against which subsequent measures can be compared. The interim survey focuses on the printers' opinions about the public involvement process and the initial application process and about the costs they incurred as part of these processes. This information is likely to be more accurate if collected at an interim point than it would be if it were collected at the end of the pilot. The post-pilot survey concentrates on changes to the production process and measures of environmental impact -- areas where any impacts are not likely to be fully evident earlier in the program. The survey instruments for each of these three stages, or "waves," is included as Appendix B.

The telephone survey will be combined with written information from the PrintSTEP application (or an equivalent form for the comparison group), to collect the data needed. The PrintSTEP application form and annual updates will complement the telephone interviews by providing written data on environmental releases before and after pilot implementation. The application template as it appears in the *PrintSTEP Plain Language Workbook* may be modified to capture the relevant data. Printers will complete the application when they first volunteer for PrintSTEP and then will update their application annually. See Appendix C for an example of a PrintSTEP Application template. Information on costs incurred related to PrintSTEP or traditional environmental regulation will be collected via an email or fax-back form that will be sent to the printer at the completion of the telephone interview (see Appendix F). An EPA contractor will conduct the telephone survey of participating printers and the comparison group of printers. The written data on the PrintSTEP applications will be collected by the pilot states as part of the PrintSTEP process.

Community Residents: Telephone Survey

Each pilot state is responsible for evaluating the experience of community participants in

PrintSTEP through telephone interviews. To collect this information consistently among the three pilot states, a survey instrument has been developed and reviewed by the PrintSTEP team's stakeholders (see Appendix D). Community residents participating in PrintSTEP will be interviewed after the public involvement process for the printer with whom they are involved is complete. Community members participating in PrintSTEP will be identified from the lists associated with the PrintSTEP Registry, PrintSTEP Information Repository and public meetings. Interviews will collect information about the effectiveness of notice, access to information, ability to comment effectively, and the overall effectiveness of participation, and related improvements that result.

1(b) Key Variables

Key variables, described in the PrintSTEP *Evaluation Strategy* (Appendix A) include: the ease in completing the PrintSTEP application; the use of the technical assistance available to PrintSTEP participants; the level of interest in implementing pollution prevention practices; and the level of public involvement for each printer.

1(c) Statistical Approach

A census of PrintSTEP participants and community participants will be conducted, therefore this section is not relevant to these groups. For the comparison group, a systematic and random sample of printers in each of the three pilot states outside of the pilot area will be taken. The list of printers in each state from which to sample will be developed primarily based on the state background questionnaires to printers. To detect a 10% difference in the mean at 5% level of significance and detecting differences with 80% power, the control group size required is calculated to be 158 printers. Based on feedback from industry representatives, additional follow-up may be required to recruit enough printers for the comparison group. If this is the case, the printing trade associations will assist in identifying the printers that would be likely to volunteer for a PrintSTEP program, and who are similar to the group of participating printers in characteristics such as environmental impact, type of printing processes used, and size of facility.

1(d) Feasibility

It is not anticipated that the printers or community members will have any problems or delays answering the questions in the telephone survey portion of the data collection. To complete the written application, the printers will have extensive guidance available to them, including the PrintSTEP *Plain Language Workbook* which gives step-by-step instructions and examples. They will also have access to technical assistance by phone provided by each of the pilot states. The pretest will specifically ask for feedback on the ease of completing the printers' fax-back form on costs. If additional instructions are needed (beyond what is provided on the form itself), such guidance will be developed and included with the form.

The greatest obstacle anticipated in this information collection is in recruiting the volunteer printers for the comparison group. To recruit the comparison group, a systematic and random sample of printers in each of the three pilot states outside of the pilot area will be taken. The list of printers in each state from which to sample will be developed based on the state background questionnaires to printers. While there are few incentives for these printers to participate, the

local printing trade associations have agreed to assist with the recruitment efforts, if needed. The analysts evaluating the data will examine the characteristics of the comparison group to insure that biases in this group are recognized and accounted for in the analysis.

The final program evaluation analysis will be available two months after the conclusion of the pilot program. Interim results will be available thirty days after the conclusion of the interim data collection. This schedule provides sufficient time for the program's decision-making needs regarding future expansion of the PrintSTEP program.

2. SURVEY DESIGN

2(a) Target Population and Coverage

The population of interest for this evaluation is printers participating in the PrintSTEP pilot program. It is estimated that a total of 175 printers will participate in the program. For such a small population, a census is considered most appropriate in producing robust, defensible, results. Additionally, a census will eliminate errors associated with a skewed sampling response. If a sampling approach were used instead, it would be important to make sure the sample represented differences among the three pilot states, the different types of printing processes (e.g., lithography, screen printing), and different size facilities. The population is not large enough to be stratified to include all these relevant subpopulations and still draw a meaningful sample. Therefore, the evaluation design proposed includes a census of volunteer participants. The anticipated response rate for printers is 90% (158 completed interviews). All of these printers will be participating in PrintSTEP voluntarily and will be informed of the requirements of the evaluation prior to volunteering for the program. An additional 156 non-participating printers will be interviewed as a comparison group. These printers will be volunteers identified systematically and randomly from a list of printers in the pilot states, who are not located in the pilot areas of St. Louis, MO, St. Cloud, MN, or Manchester, NH.

Community members who voluntarily participate in PrintSTEP will be interviewed by phone at one time during the pilot. Again, there are several subpopulations of interest including community members in the three different states and those working with different types and sizes of printing facilities. Therefore, a census of participating community members is proposed. It is anticipated that 175 community members will participate and all will be contacted. A response rate of 75% is estimated for this group (131 completed interviews).

2(b) Sample Design

As described above, a census, rather than a sample, of all participants will be conducted of the PrintSTEP participants. For the comparison group, a systematic and random sample of printers in each of the three pilot states outside of the pilot area will be taken. The list of printers in each state from which to sample will be developed primarily based on the state background questionnaires to printers. Based on feedback from industry representatives, additional follow-up may be required to recruit enough printers for the comparison group. If this is the case, the printing trade associations will assist in recruiting efforts.

2(c) Precision Requirements

Because a census will be conducted, any differences or similarities among values are actual and not due to the chance selection of a non-representative subpopulation for a survey sample. Potential for bias still exists, however. If there are significant differences between the respondent population and non-respondents, then the survey results may not accurately reflect the opinions and activities of all participants.

To determine the extent of respondent bias in the survey results, the respondent and non-respondent populations will be compared on several criteria: type of printing process, size of facility, and baseline (i.e., pre-PrintSTEP) regulatory requirements. If there is no statistical difference in these factors between the respondents and non-respondents, respondent bias in the survey would be considered unlikely, although the possibility of bias from other unexamined factors always remains.

Steps will also be taken to minimize another type of bias, known as strategic responses. Strategic responses occur where respondents alter their answers in an attempt to influence conclusions drawn from the survey overall or from their response in particular. Strategic response can be particularly problematic if respondents perceive that the survey outcome may directly alter regulatory requirements. To reduce bias and strategic responses, interviewers will: provide context for the survey, guarantee anonymity, use neutral wording, use open ended questions (these will be limited to maintain cost-effectiveness of the survey), and rotate the order of the response prompts (to avoid predisposition to selection of the first or last prompts).

2(d) Questionnaire Design

The survey instruments were developed by Abt Associates Inc., under U.S. EPA contract 68-W6-0021. The work was done with close consultation and significant input from U.S. EPA and the PrintSTEP stakeholder representative group. This group included representatives of the parties from whom the information is to be obtained, namely printers and community members. This group was directly involved with designing the evaluation strategy and data collection instruments, ensuring that: the environmental benefit of the pilot is thoroughly tracked; the data collection instruments are technically sound; the instructions are clear; the terminology is coherent, unambiguous, and understandable to respondents; respondent burden is minimized; and the data is obtainable, but has not been collected previously. Additionally, the contractor's survey research professionals reviewed the survey instruments to check that items are unambiguous, unbiased, nonrepetitive, and properly sequenced, skip patterns are clear, and answer categories are mutually exclusive and collectively exhaustive.

The survey instruments are attached as Appendix B (Survey Instruments for Printers) and Appendix D (Survey Instrument for Community Members).

3. PRETESTS AND PILOT TESTS

The printer's survey instrument will be subject to a pretest at the contractor's Survey Research Center. The pretest is conducted to verify the survey instrument will collect all of the data

required to meet the objectives of the survey in the most efficient manner. The entire draft survey will be administered to nine facilities randomly selected from the list of participating printers.

The survey of community members will be administered by the pilot states, each state will use the survey instrument developed by the stakeholder group (Appendix D). This survey instrument will also be pretested prior to the final release to states. For the pretest, the draft survey will be administered to nine community members randomly selected from the list of community members who participated in the PrintSTEP process.

Pretest interviews will be timed, and respondents will be asked to comment on the instrument. Each interviewer will propose changes in the instrument. These changes will be reviewed with EPA and if the changes can minimize burden, clarify wording, or improve utility, questions will be modified. If modifications are considered minor, results from the pretest will be included in the final survey results and the pretest respondents would not need to be interviewed again.

4. COLLECTION METHODS AND FOLLOW-UP

4(a) Collection Methods

The printers' survey will be conducted using Computer Assisted Telephone Interviewing (CATI) by experienced interviewers. The CATI programs move the interviewer swiftly and accurately through skip patterns within the instrument. This technique was selected as the most cost-effective means to minimize data processing time and data entry errors, and to reduce the burden on the respondents by reducing the length of the call, and the need for follow-up calls. Currently, printers have not yet been recruited for the pilot project, therefore, it was not possible to conduct an actual pretest of the survey. Review of the survey instruments by a survey research contractor indicates that the printer's survey will take approximately 12 minutes.

Additionally, written information on environmental impacts and costs will be collected from the comparison group via an email or fax-back form. Only cost information will be collected from the PrintSTEP printers by this method (the rest of the written data from participating printers will be submitted to state agencies as a normal part of the PrintSTEP program). The interviewer will explain the written information required during the interview and will email or fax the form to the respondent. This method will simplify the return process for the respondent. Entry and coding of written portions will be done by the states, and entry and coding of the telephone survey will be done by the survey research firm.

This combination of telephone survey and written information was considered the least burdensome for facilities without losing the reliability or accuracy of the information collected. The telephone survey is expected to last less than 15 minutes and it focuses on collecting the more subjective information. Quantitative information is collected in a written format for convenience (fax-back or email-back) and accuracy (the respondent may have to consult with their records or coworkers to complete answer these questions). Data collection procedures also include:

Interviewer requirements/training. The contractor's interviewing staff come from a

variety of backgrounds and are hired based on their verbal skills, knowledge and experience with computers, work experience related to survey research, and attention to detail. Interviewers attend basic training that covers all aspects of standard interviewing practices, including verbatim reading, refusal aversion, how to probe and record open end responses, establishing rapport, appropriate pacing and delivery and CATI system instruction. Prior to the start of the field period, interviewers participate in a project briefing to provide them with an overview of the study, a question by question review of the instrument, CATI practice, and role playing.

Field testing. The survey will be administered from the contractor's Survey Research Center. An experienced manager of telephone interview surveys will be on-site, handling survey tasks from the initial establishment of a field organization to the monitoring of survey response. Careful quality control over all aspects of data collection and preparation is an integral part of these activities.

Telephone surveys for community participants will be conducted by the participating states. At this time, the pilot states also plan to contract with a survey research firm to administer the survey. States will also be responsible for entering and coding the data.

4(b) Survey Response and Follow-up

The target response rate is 90% for printers. Interview survey data will be recorded using Computer Assisted Telephone Interviewing (CATI) by experienced interviewers. Responses are entered into the computer by the interviewer during the interview to minimize data processing time and data entry errors. To maximize response, several methods will be employed. First, interviewers are trained in identifying and contacting the most appropriate respondent. In the case of printers, this includes techniques to find the replacement contact when the original contact is no longer with the company. The survey is designed to be brief (approximately 12 minutes) to reduce burden and improve response rates. PrintSTEP printers will know about the survey before they even volunteer for the PrintSTEP program and their trade associations will be sending advance letters stressing the survey is brief and is important to the success of the pilot project as a whole. Additionally, after several attempts are made to contact the respondent, the interviewer will leave a message with a toll-free number asking the respondent to return the call.

The target response rate for community members is 75%. The interview will be conducted by the pilot states shortly after the contact participates in the PrintSTEP public involvement process to maximize response rates.

5. ANALYZING AND REPORTING SURVEY RESULTS

5(a) Data Preparation

As described above, the printers' survey will be conducted using Computer Assisted Telephone Interviewing (CATI) by experienced interviewers. Responses are entered into the computer by the interviewer during the interview to minimize data processing time and data entry errors. Data from the fax-back forms will be entered by contractor staff. The contractor maintains an in-house staff of trained and experienced coders who have worked on many kinds of surveys to assure data preparation of the highest quality. 100% key verification is carried out to ensure accurate data

entry. Each pilot state is responsible for entering the information from the printers' applications (for PrintSTEP printers) or the equivalent form (for the comparison group).

5(b) Analysis

An analysis of the survey results will be included in the final report evaluation addressing what changes have taken place in the PrintSTEP facilities, and whether or not those changes can be attributed to PrintSTEP. All information will be presented as aggregate results and the facility names of respondents will not be identified. Quantitative and qualitative results will be tabulated. Sample table shells of the tabular information to be included in this report are attached in Appendix G.

The contractor's analysts and statisticians reviewing the survey results will prepare summary statistics for each question, and will conduct a thorough analysis of the data with respect to the questions posed in the survey objectives. Trends in the data will be identified using a statistical analysis program (SAS) to run a wide range of analyses including, but not limited to, correlation matrices. Analyses will be performed to examine how the survey objectives (e.g., changes environmental releases/wastes, changes in pollution prevention practices) are influenced by the pilot state, facility size, or type of printing process. Additional analyses will examine relationships among the objectives, such as the influence of public involvement on reductions in environmental releases/wastes.

5(c) Reporting Results

The final report will be posted on-line and will also be available in hard copy.